Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended	)	WT Docket No. 99-87
	)	
Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies	)	RM-9332

To: The Chief, Wireless Telecommunications Bureau
The Chief, Public Safety and Homeland Security Bureau

COMMENTS OF TAIT NORTH AMERICA, INC. IN SUPPORT OF NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL PETITION FOR STAY OF INTEREIM NARROWBAND IMPLEMENTATION DATES.

Tait Radio Communications (Tait) is a global leader in designing and delivering radio solutions which are the right fit for a variety of industries including; public safety agencies, government services, utilities and urban transport providers. Across the world, users of Tait products and services are better able to protect themselves and the public, be more responsive and more efficient.

Tait hereby respectfully submits its comments on the Petition filed on September 29, 2009 by the National Public Safety Telecommunications Council (NPSTC) for a stay of the Federal Communications Commissions (FCC) interim deadlines for private land mobile radio (PLMR) services in the 150-174 MHz and 421-512 MHz bands to migrate to narrowband (12.5 kHz or narrower) technology.

The Commission has decreed that beginning January 1, 2013, Industrial/Business and Public Safety Radio Pool licensees in the 150-174 MHz and 421-512 MHz bands must either migrate to 12.5 kHz technology, or utilize a technology that achieves equivalent

efficiency. In order to facilitate this transition, the Commission's rules provide that beginning January 1, 2011:

1. the Commission will no longer accept applications for new wideband 25 kHz operations, or modification applications that expand the authorized contour of an existing 25 kHz station;

2. the manufacture, import, or certification of any 150-174 MHz or 421-512 MHz band equipment capable of operating with only one voice path per 25 kHz of spectrum, i.e., equipment that includes a 25 kHz mode, will be prohibited; and

3. applications for equipment authorization must specify 6.25 kHz capability or equivalent efficiency.

Tait Response

Migration Date

We fully support the 2013 deadline for licensees to migrate to 12.5 kHz technology, or utilize a technology that achieves equivalent efficiency.

Provision 1.

We offer no comment other to say that if the date is deferred then that deferral should apply to both Public Safety and PLMR licensees.

Provision 2.

We disagree with this interpretation of the Commission's rules. Please refer to Appendices One and Two for our reasoning.

Our interpretation shows that there is no prohibition on the certification or sale of transmitters capable of one voice path per 25 kHz channel bandwidth provided those transmitters have at least one mode that meets the efficiency requirements of CFR Title 47 Part 90.203(j)(5); and that Part 90 transmitters designed to operate in the 150–174 MHz and 421–512 MHz bands that operate with a maximum channel bandwidth greater than 12.5 kHz will be permitted to be manufactured in, or imported into, the United States until the 31 December 2012.

We respectfully suggest that there is ambiguity in the relevant rules and that this may be an opportune time for the Commission to offer clarification.

Provision 3.

We offer no comment.

Respectfully Submitted

TAIT RADIO COMMUNICATIONS

By.....

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Appendices

Appendix One

CERTIFICATION

Background

There is a widely held belief that from the 1st January 2011 Part 90 certification for VHF and UHF radio transmitters that include a one voice path per 25 kHz channel bandwidth mode will no longer be permitted. However an examination of the rules shows this may not be the case.

CFR Title 47 Part 90.203(j)(4) states:

Applications for part 90 certification of transmitters designed to operate on frequencies in the 150.8–162.0125 MHz, 173.2–173.4 MHz, and/or 421–512 MHz bands, received on or after January 1, 2011, except for hand-held transmitters with an output power of two watts or less, will only be granted for equipment with the following channel bandwidths:

(i) 6.25 kHz or less for single bandwidth mode equipment;

(ii) 12.5 kHz for multi-bandwidth mode equipment with a maximum channel bandwidth of 12.5 kHz if it is capable of operating on channels of 6.25 kHz or less;

(iii) 25 kHz for multi-bandwidth mode equipment with a maximum channel bandwidth of 25 kHz if it is capable of operating on channels of 6.25 kHz or less; and

(iv) Up to 25 kHz if the equipment meets the efficiency standard of paragraph (j)(5) of this section.

CFR Title 47 Part 90.203(j)(5) Applications for part 90 certification of transmitters designed to operate on frequencies in the 150.8–162.0125 MHz, 173.2–173.4 MHz, and/or 421–512 MHz bands, received on or after January 1, 2011, must include a certification that the equipment meets a spectrum efficiency standard of one voice channel per 6.25 kHz of channel bandwidth. Additionally, if the equipment is capable of transmitting data, has transmitter output power greater than 500 mW, and has a channel bandwidth of more than 6.25 kHz, the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.

Discussion

Mode (i) is clear and there can be no argument with it.

Mode (ii) clearly says that transmitters with a one voice channel per 12.5 kHz channel bandwidth mode will be certified if they also have a 6.25 kHz channel bandwidth mode. This is in line with the Commission requirement for all operators to move to one voice

channel per 12.5 kHz channel bandwidth or less equipment by January 1st 2013. One voice path per 12.5 kHz channel bandwidth is patently permitted.

Mode (iii) using the argument for Mode (ii) it is equally clearly that transmitters with a one voice channel per 25 kHz channel bandwidth mode will be certified if they also have a 6.25 kHz channel bandwidth mode. One voice path per 25 kHz channel bandwidth is patently permitted.

Mode (iv) allows for a single mode using a 25 kHz channel bandwidth provided it has a spectrum efficiency of one voice path per 6.25 kHz bandwidth. This mode accounts for multiplexed or digital modulation modes and its inclusion lends validity to the offered interpretation of Mode (iii).

CFR Title 47 Part 90.203(j)(5) requires a certification that any transmitter will meet a spectrum efficiency of voice channel per 6.25 kHz of channel bandwidth. This cannot be interpreted as meaning that only a 6.25 kHz channel bandwidth mode or modes with equivalent spectrum efficiency will be certified since the Commission is clear that transmitters capable of one voice path per 12.5 kHz channel bandwidth will be certified. Therefore this clause cannot be used to counter the one voice path per 25 kHz channel bandwidth capability expressed in CFR Title 47 Part 90.203(j)(4)(iii).

Conclusion

That there is no prohibition on the certification or sale of transmitters capable of one voice path per 25 kHz channel bandwidth provided those transmitters also have at least one mode that meets the efficiency requirements of CFR Title 47 Part 90.203(j)(5).

Appendix Two

MANUFACTURE AND IMPORTATION

Background

There is a widely held belief that from the 1st January 2011 Part 90 VHF and UHF radio transmitters that include a one voice path per 25 kHz channel bandwidth mode will no longer be permitted to be manufactured in, or imported into, the United. However an examination of the rules shows this may not be the case. The Rules state:

CFR Title 47 Part 90.203(j)(10) Except as provided in this paragraph, single-mode and multi-mode transmitters designed to operate in the 150–174 MHz and 421–512 MHz bands that operate with a maximum channel bandwidth greater than 12.5 kHz shall not be manufactured in, or imported into, the United States after January 1, 2011, except as follows:

(i) To the extent that the equipment meets the efficiency standard of paragraph (j)(3) of this section, or

(ii) Where operation with a bandwidth greater than 12.5 kHz is specified elsewhere.

CFR Title 47 Part 90.203(j)(3) states "Applications for part 90 certification of transmitters designed to operate on frequencies in the 150.8–162.0125 MHz, 173.2–173.4 MHz, and/or 421–512 MHz bands, received on or after February 14, 1997 must include a certification that the equipment meets a spectrum efficiency standard of one voice channel per 12.5 kHz of channel bandwidth. Additionally, if the equipment is capable of transmitting data, has transmitter output power greater than 500 mW, and has a channel bandwidth of more than 6.25 kHz, the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.

Discussion

CFR Title 47 Part 90.203(j)(10) clearly prohibits the manufacture in, and importation into, the United States of transmitters designed to operate in the 150–174 MHz and 421–512 MHz bands that operate with a maximum channel bandwidth greater than 12.5 kHz on or after January 1st 2011. However there are two stated exceptions to that prohibition.

Exception one is clear, it will allow manufacture in, or importation into, the United States of transmitters using a channel bandwidth wider than 12.5 kHz provided they demonstrate a spectrum efficiency of one voice path per 12.5 kHz channel bandwidth or less.

Exception (ii) can be interpreted in two ways. If the word "operation" is taken literally then, since the rules (CFR Title 47 Part 90.209(b)(5) Note 3) permit the operation of transmitters with a one voice path per 25 kHz channel bandwidth mode until and including the 31st December 2012, manufacture and importation of such equipment is also permitted until that date.

If the word "operation" is interpreted more broadly then it could refer to CFR Title 47 Part 90.203(j)(4)(iii) which would allow indefinite manufacture or importation. We suspect this interpretation would not be accepted however.

Conclusion

Part 90 transmitters designed to operate in the 150–174 MHz and 421–512 MHz bands that operate with a maximum channel bandwidth greater than 12.5 kHz will be permitted to be manufactured in, or imported into, the United States until the 31 December 2012.